

## REMARKS

### Overview

Claims 1-11 are now pending in this application. Claims 1, 6, 8, 10, and 11 are amended. Claims 5 and 9 have been canceled. No new subject matter has been added. The amendments to the claims are fully supported by the specification as originally filed. Applicants respectfully request reconsideration of the above-identified application in view of the remarks that follow.

### Claim Rejection 35 U.S.C. § 102(a), (b), and (e)

Claims 1-4 and 8 stand rejected under 35 U.S.C. § 102(a), (b), and (e) as being anticipated by Pace et al, U. S. Patent No. 4,507,142.

The Examiner states that Pace teaches aqueous ('142, col. 7, lines 40-53) foliar fertilizer compositions comprising an alpha-oximino alkanolic acid component (Abstract) in combination with a second essential ingredient, i.e., one or more sources of nitrogen, particularly conventional water soluble N-fertilizer compounds such as urea, ammonia, and ammonium and nitrate compounds, and water soluble urea and formaldehyde condensation products ('142, col. 6, lines 12-35). The Examiner states that other optional micronutrient components include water soluble salts of zinc, iron, copper, or other metals, such as sulfate salts ('142, col. 7, lines 54-61), and surfactants ('142, col. 8, lines 54-61), including non-ionic surfactants ('142, col. 9, lines 29-38).

Applicants respectfully traverse. Anticipation requires the disclosure in a single prior art reference of each element of the claim under consideration. *In re Dillon* 919 F.2d 688, 16 USPQ2d 1897, 1908 (Fed. Cir. 1990) (en banc), cert. denied, 500 U.S. 904 (1991). Claim 1 has been amended to further recite an "an acidic pH adjusting agent." Support for this amendment can be found in the specification, at page 6. In contrast, the Pace reference does not disclose

Applicants' composition with an acidic pH adjusting agent. Thus, Applicants respectfully submit that Pace et al does not teach or suggest all the elements of claim 1.

Dependent claims 2-3 recite similar elements as claim 1 and are patentable over Pace for similar reasons as those argued above, plus the elements in the claims. Independent claim 8 has been amended to recite the additional element "an acidic pH adjusting agent." Therefore, claim 8 is patentable over Pace for similar reasons as those argued above, plus the elements in the claims. Dependent claim 10 recites similar elements as claim 8 and is patentable over Pace for similar reasons as those argued above, plus the elements in the claims. Independent claim 11 has been amended to recite the additional element "an acidic pH adjusting agent." Therefore, claim 11 is patentable over Pace for similar reasons as those argued above, plus the elements in the claims. Therefore, Applicants submit the present invention is clearly not anticipated by Pace et al. Applicants respectfully request reconsideration and withdrawal of the objection under 35 U.S.C. §§ 102(a), (b), and (e).

**Claim Rejection 35 U.S.C. § 103(a)**

A. Claims 1-11 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the combined teachings of Pace et al (U.S. Patent No. 4,507,142), Young (U.S. Patent No. 4,214,888), and Moore, Jr. (U.S. Patent No. 4,297,130).

The Examiner states that Young teaches foliar fertilizer compositions characterized by low phytotoxicity, low corrosivity, and improved toxicity stability comprising urea nitrogen and a pH buffer which maintains the pH between 6 and 7.6. The Examiner cites that '142 teaches suggested buffering systems include those with acetic acid ('142, cols. 5-6, col 5, lines 40-45, col. 6, lines 34-37). The Examiner states that the compositions may further contain micronutrients,

such as sulfate salts of copper, zinc, and iron ('142, col. 7, lines 20-30), and surfactants ('142, col. 4, lines 28-31). The Examiner states that one of ordinary skill in the art would be motivated to combine the pH buffering systems of the foliar fertilizer systems of Young with the foliar fertilizer compositions of Pace in order to gain the low corrosiveness of Young.

Applicants respectfully traverse this rejection. Applicants assert that that Examiner has not established a *prima facie* case of obviousness. The Examiner has the burden under 35 U.S.C. § 103 to establish a *prima facie* case of obviousness. *In re Fine*, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In order for the Examiner to establish a *prima facie* case of obviousness, three base criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *M.P.E.P.* § 2142 (citing *In re Vaack*, 947 F.2d 488, 20 USPQ2d 1438 (Fed.Cir. 1991)).

First, the claimed invention is not obvious since the cited references teach away from Applicants' invention. Young et al describe that "the investment in commercial crops is too great to justify *any significant deviation* from pH levels described herein. Accordingly, the grower and applicator will prefer, if not *require* the lowest possible toxicity within corrosion limits. That condition is usually realized at pH levels of about 6 to 6.5." ('888, Col. 4, lines 45-50) (emphasis added). Furthermore, Moore et al describe that the reaction mixture "was neutralized to pH 6.6." ('130, Col 3, lines 41-45). The Pace reference does not even mention pH in its specification. In

contrast, Applicants disclose at page 8 of the specification that "[p]referably enough acid is added to adjust the pH in the range of 2 to 6, more preferably in the range of 2.5 to 5 and most preferably in the range of about 3 to about 4." Furthermore, Applicant's claim 10 claims the composition "wherein the amount of acid in the composition is sufficient to bring the pH of the applied liquid to within the range from 2 to 6." Thus, the claimed invention is not obvious since Young et al teach away from Applicants' invention, that is, a person of ordinary skill, upon reading the Young patent with Pace et al and Moore et al, would be directed to a pH greater than 6. The references cited by the Examiner teach away from the claimed combination because Applicants teach adjusting the pH to levels less than 6, more preferably in the range of 2.5 to 5 and most preferably in the range of about 3 to about 4. Therefore, the references may be said to teach away because a person of ordinary skill, upon reading the reference, would be led in a direction divergent from the path the Applicant took. *In re Gurley*, 27 F.3d 551, 31 USPQ 2d 1130, 1131 (Fed. Cir. 1994); *United States v. Adams*, 383 U.S. 39, 52, 148 USPQ 479, 484 (1966); *In re Sponnoble*, 405 F.2d 578, 587, 160 USPQ 237, 244 (C.C.P.A. 1969); *In re Caldwell*, 319 F.2d 254, 256, 138 USPQ 243, 245 (C.C.P.A. 1963).

Second, an invention is not obvious where one prior art reference teaches away from a combination with second prior art reference. *In re Rudko*, No. 98-1505, 1999 WL 319508, at \*6 (Fed. Cir. May 14, 1999). Young et al teach away from Pace et al in the desirability of a fertilizer composition containing phosphorous. Young et al describe that "[p]hosphorous compounds should be *avoided* except when used in the minor amounts." ('888, Col. 3, lines 21-23). In contrast, Pace et al describe in claim 16(c), a "composition according to claim 2 capable of being applied as a foliar spray fertilizer, said composition comprising a solution of the following constituents: c. Phosphorous: from about 0.5% to about 35% ..." ('142, claim 16) Pace et al

further describe "[a]n especially effective embodiment of the composition of this invention is as follows: c. Phosphorus: from about 0.5% to about 35%, preferably from about 1% to about 25%, preferably from about 1% to about 25%.." ('142, Col. 11, lines 24-35). Therefore, because Young et al teaches away from Pace et al, there is no suggestion or incentive for one skilled in the art to combine the cited references. Furthermore, a suggestion to combine must come from the prior art and not from Applicants' specification or impermissible hindsight. Thus, the claimed invention is nonobvious.

Furthermore, Young et al also teach away from Pace et al in the desirability of a fertilizer composition containing potassium and/or phosphorous. Young describes that "compositions containing any major nutrients other than nitrogen, e.g., potassium and/or phosphorous, should *not* be added to the compositions of this invention for their nutrient value due to higher cost and *problems* associated with excess buffer." ('888, Col. 5, lines 27-32) (emphasis added). In contrast, Moore, Jr. et al describe the use of "potassium phosphate and potassium polyphosphates" as being "suitable sources of secondary nutrients." ('130, Col. 2, lines 26-42). Pace et al describes a "fertilizer composition ..[that] preferably includes sources of potassium, sulfur and phosphorus." ('142, Col. 6, lines 57-59). Furthermore, Pace describes that "[i]n the preferred embodiments, the quantity of phosphorus is at least about 5 to 35 weight percent P...[and] the quantity of potassium is at least about 0.5 to 30 weight percent." ('142, Col. 7, lines 19-26) (emphasis added). Therefore, because Young et al teach away from Pace et al, there is no suggestion or incentive for one skilled in the art to combine the cited references. Furthermore, a suggestion to combine must come from the prior art and not from Applicants' specification or impermissible hindsight. The references themselves contain no suggestion or

motive to combine Young et al with Pace et al or Moore, Jr. et al. Thus, the claimed invention is nonobvious.

Third, Applicants respectfully remind Examiner that the teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in Applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991); MPEP § 2143. The Examiner must avoid hindsight. *In re Bond*, 910 F.2d 831, 834, 15 USPQ2d 1566, 1568 (Fed. Cir. 1990). It respectfully submitted that the Examiner appears to be employing hindsight to arrive at the Applicants' invention, selecting aspects from at least three different references to attempt to piece together Applicants' invention. The Examiner is reminded that it is impermissible to use the Applicants' specification as a template to arrive at the conclusion that the claimed invention is obvious and that the present invention must be considered as a whole. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in Applicants' disclosure. In light of the above, Applicants submit that the present invention is not obvious by Young et al., Moore, Jr. et al and Pace et al.

Therefore, claim 1 is nonobvious. Claims 2-7 dependent on nonobvious claim 1 are likewise nonobvious over Young et al, Pace et al, and Moore, Jr. et al for similar reasons as those argued above. Independent claims 8 and 11 are nonobvious over Young et al, Pace et al, and Moore, Jr. et al for similar reasons as those argued above. Claims 9-10 dependent on nonobvious claim 8 are likewise nonobvious. In view of the traversal made above, Applicants respectfully request reconsideration and withdrawal of the rejection to claims 1-11 under 35 U.S.C. §103(a).

B. The Examiner states that in claim 9 Applicant has specified application rates for this composition. The Examiner states that absent evidence to the contrary, concentrations and ratios

are obvious because it is within the skill of the ordinary artisan to determine appropriate concentrations or ratios of ingredients. Applicants disagree but in the interest of expediting prosecution, the Applicants have canceled claim 9 and amended claim 10 so that it now depends from claim 8. Applicants respectfully assert that the rejection is now moot and accordingly request that the rejection be withdrawn.

C. The Examiner states that the data presented in the specification demonstrates an improved benefit for the purposes of moss control when Applicant's compositions are applied to moss. The Examiner states that the objective evidence of nonobviousness must be commensurate in scope with the scope of the claims. *In re Tiffin*, 171 USPQ 294. The Examiner states that a showing limited to a single species can hardly be considered probative of the invention's nonobviousness in view of the breadth of the claims.

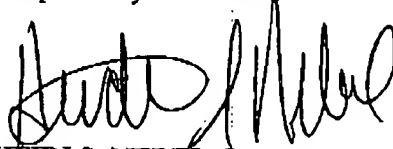
Applicants respectfully disagree and submit that the objective evidence of nonobviousness is commensurate in scope with the scope of the claims. In the specification, at pages 9-10, Applicants have provided ample objective evidence of nonobviousness. Applicants respectfully direct Examiner's attention to the various formulations of the liquid composition for controlling moss, Table 1, at page 10 in the specification, and the corresponding results in Table 2, at page 11 in the specification. Applicants have also shown that the present invention is safe and effective on 125 varieties of bentgrass. Furthermore, claims 1, 8 and 11 have been amended so that it now recites the additional limitation "an acidic pH adjusting agent." Therefore, in light of the evidence above and the amendment(s), the present invention is not obvious and the evidence provided is commensurate in scope with the scope of the claims.

**Conclusion**

No fees or extensions of time are believed to be due in connection with this amendment; however, consider this a request for any extension inadvertently omitted, and charge any additional fees to Deposit Account No. 26-0084.

Reconsideration and allowance is respectfully requested.

Respectfully submitted,



HEIDI S. NEBEL, Reg. No. 37,719  
McKEE, VOORHEES & SEASE, P.L.C.  
801 Grand Avenue, Suite 3200  
Des Moines, Iowa 50309-2721  
Phone No: (515) 288-3667  
Fax No: (515) 288-1338  
**CUSTOMER NO: 27407**

Attorneys of Record

- pw/bja -